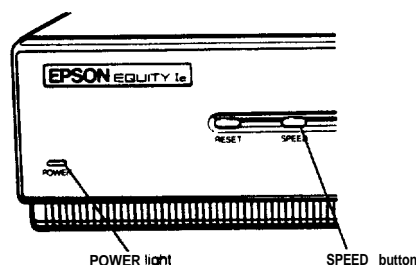


Computer Specifications

CPU:	8086 Microprocessor, 0 wait states, 8-10MHz switch selectable clock speeds, 16-bit data bus
Math Co-Processor	Socket for 8/10MHz 8087 co-processor
RAM	640KB with parity standard on system board
ROM	64KB standard
I/O Expansion Slots:	Four full-length 8-bit, I/O slots available in standard configuration
Disk Controllers:	
Floppy disk:	On system board Supports two 3.5" double density (720KB) drives
Hard disk:	Standard XT-type controller board
Mass Storage:	Two 3.5" internal storage devices maximum
Standard:	3.5" Half-height floppy disk drive 720KB storage capacity
Optional:	3.5" 720KB floppy disk drive
Optional:	3.5" Half-height hard disk drive 20MB storage capacity
Speaker:	Internal non-adjustable
Clock/Calendar:	Real-time clock/calendar with battery backup
Keyboard:	Detachable, enhanced AT-style, 2-position, 101 sculpted keys, 58-key QWERTY configuration, 12 function keys
Interfaces:	Parallel, serial, keyboard, mouse and video ports standard
Parallel:	Centronics-compatible, DB25 female connector on system board
Serial:	RS-232C compatible, DB25 male connector on system board
Keyboard:	IBM-compatible, 6-pin mini DIN on system board
Mouse:	IBM-compatible, 6-pin DIN connector on system board
Video:	MCGA-compatible, DB15 connector on system board
Environmental Requirements:	
Temperature:	
Operating range:	41° to 95° (5° to 35°C)
Storage range:	-4° to 140° (-20° to 60°C)
Humidity:	
Operating range:	20% to 80% Non-condensing
Storage range:	10% to 90% Non-condensing

Power supply:	Auto-sensing, fan cooled worldwide	
Input voltage:	115/230 V AC, 50/60Hz, 2.0A	
Output voltage:	+5V DC, 76A -5V DC, 0.25A +12V DC, 1.6A -12V DC, 0.25A	
Output power:	62 W (72 W peak)	
Physical Characteristics:	CPU	Keyboard
Width:	13.76 in	19.3 in
Depth:	15.94 in	7.7 in
Height:	4.5 in	1.8 in
Weight:	15.5 lbs.*	4.3 lbs
	*Single floppy drive configuration	
Software:	Includes MS-DOS 3.3 GW-BASIC, XTREE™ and Epson enhanced utility software	
Options:		
Video displays:	12" Analog Monochrome Display 13" Analog Color Display (VGA)	
Hard Disk Controller:	PC/XT half card	

Switch Settings



There are no DIP switches or jumpers to set for proper operation of the Equity 1e.

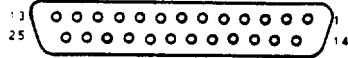
The CPU SPEED switch selects between 8 MHz and 10 MHz. When the computer is running at 8 MHz, the power light is orange, and at 10 MHz, the light is green.

The CPU SPEED button is located on the front panel, near the disk drive bay.

EQUITY Ie

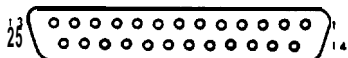
Connector Pin Assignments

Parallel Port Connector



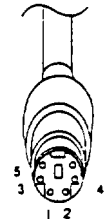
PIN NO.	SIGNAL NAME	DIRECTION	DESCRIPTION
1	-STROBE	O	
2	D0	I/O	Printer Data Bit 0
3	D1	I/O	Printer Data Bit 1
4	D2	I/O	Printer Data Bit 2
5	D3	I/O	Printer Data Bit 3
6	D4	I/O	Printer Data Bit 4
7	D5	I/O	Printer Data Bit 5
8	D6	I/O	Printer Data Bit 6
9	D7	I/O	Printer Data Bit 7
10	-ACK	I	Acknowledge
11	+BUSY	I	Printer Busy
12	+PE	I	End of Paper
13	+SLCT	I	Printer Select
14	-AUTOFT	O	- Auto Feed XT
15	-ERROR	I	Printer Error
16	-INIT	O	Printer Initialize
17	-SLCTIN	O	
18	GND		Ground
19	GND		Ground
20	GND		Ground
21	GND		Ground
22	GND		Ground
23	GND		Ground
24	GND		Ground
25	GND		Ground

Serial Port Connector



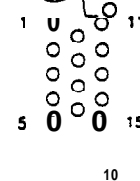
PIN NO.	SIGNAL NAME	DIRECTION	DESCRIPTION
1	NC		Not Connected
2	-DTR	O	Transmit Data
3	-RTD	I	Receive Data
4	-RTS	O	Request to Send
5	-CTS	I	Clear to Send
6	-DSR	I	Data Set Ready
7	SG		Signal Ground
8	RLSD	I	RLSD
9	NC		Not Connected
10	NC		Not Connected
11			Tied to line 20
12	NC		Not Connected
13	NC		Not Connected
14	NC		Not Connected
15	NC		Not Connected
16	NC		Not Connected
17	NC		Not Connected
18	NC		Not Connected
19	NC		Not Connected
20	-DTR	O	Data Terminal Ready
21	NC		Not Connected
22	-RI	I	Ring Indicator
23	NC		Not Connected
24	NC		Not Connected
25	NC		Not Connected

Keyboard or Mouse Connector (Interchangeable)



PIN NO.	SIGNAL NAME	DIRECTION	DESCRIPTION
1	+ KBD DATA	I/O	Keyboard Data
2	NC		Reserved
3	GND		Ground
4	+5 V		
5	+ KBD CLK	I/O	Keyboard Clock
6	NC		Reserved
SHIELD	Frame Ground		

Monitor Connector



PIN NO.	SIGNAL NAME	DIRECTION	DESCRIPTION
1	RED		
2	GREEN		
3	BLUE		
4	NC		Reserved
5	NC		Reserved
6	RED RETURN		
7	GREEN RETURN		
8	BLUE RETURN		
9	KEY		
10	GND		Ground
11	MOS0	I	MONITOR SENSE 0
12	MOS1	I	MONITOR SENSE 1
13	HSYNC	O	HORIZONTAL SYNC
14	VSYNC	O	VERTICAL SYNC
15	NC		Reserved

Monitor Type Sensing

Pin 11 Pin 12		
MOS0	MOS1	STATUS
1	1	No Monitor Connected
0	1	Analog Color Monitor
1	0	Analog Monochrome Monitor
0	0	Other Monitor Type

Now 0 indicates a GROUND condition and 1 indicates an NC condition on the corresponding monitor pin.

I/O Port Addresses

Address	Function
000 – 01F	DMA Controller, 8237A – 5
020 – 03F	Interrupt Controller
040 – 05F	Timer / Counter
060 – 062	I/O Ports
063 – 06F	System Board/Control and Status
080 – 08F	DMA Page Registers
0A0 – 0AF*	Interrupt Controller Extension
0B0 – 0BF	Real -Time Clock Command/Status
0E0 – 0EF	Real -Time Clock Counter/RAM
320 – 32F	Fixed Disk
378 – 37F	Parallel Port
3C0 – 3DF	Video Subsystem
3F0 – 3F7	Diskette
3FS – 3FF	Serial Port

Hardware Interrupts

Number	Function
IRQ0	Timer Output
IRQ1	Keyboard/Mouse/RTC
IRQ2	Video
IRQ3	Reserved
IRQ4	Serial Port 1
IRQ5	Hard Disk
IRQ6	floppy Disk
IRQ7	Parallel Port

- The NMI mark can be set and reset through system software as follows:

Writes hex. 50 to I/O address hex. A0 (enable NMI)

Write hex. 00 to I/O address hex. A0 (enable NMI)

Note: I/O Address hex 000 to 0FF are reserved for the system board I/O.

DMA Channels

Channel	Function
0	Not Used
1	Spare
2	FDD Controller
3	HDD Controller

Installation/Support Tips

Power

The Equity le has a power supply that is switchable between 115 V, for USA and Canadian use, and 230 V, for use in other countries. There is no manual switch, as the power supply is auto-sensing.

Video Adapters

- - - When using monitors other than the Epson VGA monitors with the Equity le, it is recommended that you power the monitor on before the computer. This ensures that the Equity le will automatically sense the monitor type at boot.
- - - It is possible to use other optional video adapters in the Equity le. However, CGA is not an allowed option due to a register group conflict.

Installing Floppy Disk Drives

- - - When installing a floppy disk drive as drive B, remember to set the drive select jumper to the second position and attach the pass-through connector on the floppy drive controller cable to the drive, not the end connector.

Installing Hard Disk Drives

- - - If you are having difficulty in formatting the hard disk drive, try starting over with the Unconditional Format option in diagnostics.
- - - When running a low-level format on the Equity le optional hard disk drive, set the interleave to 5 for optimum performance.

Information Reference List

Engineering Change Notices

EQle-001	4/13/89	Equity le ROM BIOS Update to Release 1.70
EQle-002	3/15/89	Equity b Power Supply Upgrade Kit
EQle-003	5/1/89	Equity b ROM BIOS Update to Release 1.72
EQle-004	6/26/89	Equity b ROM BIOS Upgrade to Release 1.74

Technical Information Bulletins

EQSER-002	3/15/89	Equity Series Enhanced Keyboard Part Number Information
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Product Support Bulletins

S-0047A	6/12/89	Using Expanded Memory with Equity and Apex.
S-0054B	5/4/89	Using Math Coprocessors With Equity and Apex.
S-0062A	6/9/89	Equity Series Computers - ROM History.
S-0071	3/10/89	Equity le/MiniScribe 8425F HDD Interleave.
S-0075	3/21/89	Equity le Common Questions and Answers.
S-0077	4/13/89	Equity le Compatibility List.
S-0080	4/19/89	Apex/Apex Plus/Equity Series Keyboards.
S-0081A	6/12/89	External 5.25" FDDs for the Equity b.
S-0083	5/23/89	Equity b Video Mode Compatibility.
S-0084	6/12/89	Equity b RAM Board Compatibility List.
S-0093	8/11/89	Novell Netware Compatibility Test Results for Equity b.

Related Documentation

Y16299100500		Equity le MS-DOS 3.3 Manual
Y16299100200		Equity le GW-BASIC Manual
M-TM-EQle		Equity le Technical Manual
M-PM-EQle		Equity le Technical Reference Manual
M-PL-EQle		Equity le Parts List
Q50188015		Equity le User's Guide